

ABSTRACT OF THE DISCLOSURE

A thermal bubble type micro inertial sensor formed by micromachining technology includes a substrate, a heater arranged on the substrate, four temperature sensing members, a cap arranged above the substrate to cover and encapsulate the heater and the temperature sensing members, and a liquid filled into a chamber formed between the cap and the substrate. The temperature sensing members are symmetrical arranged at opposite sides of the heater and on the substrate, respectively, to sense the temperature difference beside the heater. The heater heats and partially vaporizes the liquid to form a thermal bubble in the liquid environment. Controlling the liquid characteristics and heater temperature may control the bubble size and enable the temperature sensing members to sense the temperature distribution variation. The sensor may serve as an inclinometer to sense the tilt, as well as an accelerometer to measure the acceleration.